

PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number: 04015-0005001
	Application Number 10/769,210	Filed January 30, 2004
	First Named Inventor Curt Thies	
	Art Unit 1713	Examiner Kelechi C. Egwim
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>Notice of Appeal filed June 9, 2008.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <p><input type="checkbox"/> applicant/inventor.</p> <p><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</p> <p><input checked="" type="checkbox"/> attorney or agent of record <u>18,411</u> (Reg. No.)</p> <p><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____</p> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.</p> <p><input type="checkbox"/> Total of no. forms are submitted.</p>		

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Curt Thies
Serial No. : 10/769,210
Filed : January 30, 2004
Title : BEADING

Art Unit : 1713
Examiner : Kelechi C. Egwim
Conf. No. : 7576

Mail Stop Appeal Brief - Patents

Hon. Commissioner for Patents
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PRE-APPEAL BRIEF REQUEST FOR REVIEW

The claims are rejected as indefinite because the terms "highly water-soluble" and "swelling rapidly" in claim 1 are said to be indefinite. Claims 1 and 2 stand rejected as anticipated by or in the alternative as unpatentable over Cohen. Claims 1, 2, 9 and 10 stand rejected as anticipated by or unpatentable over Jederstrom. Claims 1, 2, 9 and 10 read as follows:

1. Polymer bead of dry bead structure incorporating a diluent that is highly water-soluble characterized by swelling rapidly when placed in contact with aqueous media to form a water-swollen gel bead.
2. Polymer beads in accordance with claim 1 that are a dry-free-flow powder.
9. Agarose-Poly (ethylene glycol) beads made by the method of claim 3.
10. Agarose-Poly (ethylene glycol) beads made by the method of claim 4.

The objection to "swelling rapidly" was overcome in the first appeal brief in the sentence spanning pages 3 and 4 where we said:

The description states, "By rapid is meant that primary geometry changes of the bead due to swelling caused by the aqueous medium occur within 5 to 20 minutes after the beads are placed in contact with an aqueous medium. Bead dimensional changes occurring after this time frame normally are small". P. 2, lines 3-5.

The objection to "highly water-soluble" was never made before during 4 1/2 years of prosecution and six previous office actions.

The specification states.

Candidate diluent materials must be readily or freely soluble in water. It must not take much time to stabilize them in water. Candidate diluents, when present in large amounts relative to the amount of gel forming polymer, cannot destroy the ability of the gel-forming polymer to produce a gel. Suitable diluents that pass this specification have a MW below approximately 20,000 daltons. P. 2, line 30 – P. 3, line 4.

Table 1 has a number of candidate diluents. P. 4, lines 19-31.

The portion of Cohen upon which the Examiner relies is quoted verbatim on P. 4 of the Second Appeal Brief.

The Examiner states that in the abstract and col. 6, lines 49-54, the reference teaches dry polymer bead particles comprising highly water-soluble diluents, such as polyoxyethylene alcohols, but those dry polymer beads (i.e., PVC) do not swell in water. That is, none of the beads in the reference are water-swellaable, so they cannot have rapid water swelling properties as called for by claims 1 and 2.

Furthermore, the molecules disclosed in the reference, such as polyoxyethylene alcohols, which the Examiner asserts are highly water-soluble diluent molecules, are well-established nonionic surfactants. They are not diluents, but are added in small amounts to systems like those disclosed in the reference in order to form stabilized oil (monomer) droplets dispersed in an aqueous medium. These molecules are specifically synthesized so they gather at oil-water interfaces to provide stable monomer droplets. They are not diluents, let alone diluents that remain in the final dry beads when the bead production process is complete.

It is thus impossible to read claims 1 or 2 on the reference calling for polymer beads of dried bead structure incorporating a diluent that is highly water-soluble characterized by swelling rapidly when placed in contact with aqueous media to form a water-swollen gel bead.

We have shown above how the reference fails to anticipate the subject matter of claims 1 and 2, and the functions and results of the structure disclosed in the reference are so different from that of the invention disclosed in this application and claimed in claims 1 and 2 that it can hardly be said that the subject matter as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made.

As the Supreme Court said in *KSR International Co. v. Teleflex Inc.*, 82 U.S.P.Q. 2d 1385, 1397 (U.S. 2007)

A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning. See *Graham*, 383 U.S., at 36 (warning against a “temptation to read into the prior art the teachings of the invention in issue” and instructing courts to “guard against slipping into the use of hindsight”)(quoting *Monroe Auto Equipment Co. v. Heckethorn Mfg. & Supply Co.*, 332 F. 2d 406, 412 [141 USPQ 549] (CA6 1964))).

Here, the Examiner relied upon hindsight to arrive at the determination of obviousness. It is impermissible to use the claimed invention as an instruction manual or “template” to piece together the teachings of the prior art so that the claimed invention is rendered obvious.¹ This court has previously stated that “[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.”² *In re Fritch*, 23 U.S.P.Q. 2d 1780, 1784 (Fed. Cir. 1992).

The final rejection is doing nothing more than attempting to reconstruct the prior art in the light of the invention claimed here through hindsight in direct violation of the warning stated in *KSR*.

The portion of *Jederstrom* upon which the Examiner relies is quoted verbatim on page 8 of the Second Appeal Brief.

The reference does not teach dry polysaccharide bead particles, such as cross-linked agarose comprising highly water-soluble diluents such as polyoxyethylene glycol. Placing the beads disclosed in the reference (Col. 6, lines 37-49) in an aqueous solution of low molecular weight poly-lower alkylene glycol, such as poly (ethylene glycol) sugar alcohols such as sorbitol or the like does not produce beads that correspond to the dry bead structure of claims 1, 2, 9 and 10 that, contain highly water-soluble diluents and characterized by swelling rapidly when placed in contact with aqueous media to form a water-swollen gel bead.

¹ *In re Gorman*, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). See also *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir. 1985).

² *In re Fine*, 837 F.2d at 1075, 5 USPQ2d at 1600.

First consider that the reference discloses a low molecular weight poly-lower alkylene glycol, such as poly (ethylene glycol), sugar alcohols such as sorbitol, or the like, added to the disclosed system which is a hydrophilic softening or water retaining agent (Col. 3, lines 9-14) and discloses that these types of compounds are present in an aqueous medium into which the disclosed beads (Col. 6, lines 37-49) are placed and are initially free of water-soluble diluents. The disclosed beads are not polymer beads of dry bead structure incorporating a diluent that is highly water-soluble characterized by swelling rapidly when placed in contact with aqueous media to form a water-swollen gel bead. The compounds disclosed in the reference performed a totally different function in acting as a softening agent or water retention agent. In the invention of claims 1, 2, 9 and 10 the compounds do not act as a softening agent or water retention agent but are an integral part of the dry bead structure.

Second, the structure of the beads of claims 1, 2, 9 and 10 immersed in an aqueous medium become that of the gel component of the original dry beads which remains after the initially entrapped diluent escapes from the beads into the surrounding aqueous medium. The diluent present initially in the dry beads sets the internal gel structure, and this diluent is present throughout the bead preparation process. The compounds identified by the Examiner are present only in the aqueous solution in the reference, not in dry bead structure as disclosed and claimed in claims 1, 2, 9 and 10.

All of the beads disclosed in the reference are produced free of water-soluble diluents by a chemical cross linking process. This cross linking process fixes and therefore defines the internal structure of such beads. They are produced in the absence of highly soluble water diluents. When such beads are placed in an aqueous medium, and are no longer dry bead structure, anything entering the beads that may have been dissolved in the aqueous medium is then in beads of wet structure, not dry bead structure.

In any event the reference fails to disclose the diffusion of anything into the beads, does not disclose that this diffusion occurs and does not even mention the possibility of such diffusion occurring.

"A reference is only good for what it clearly and definitely discloses." *In re Hughes*, 145 U.S.P.Q. 467, 471 (C.C.P.A. 1965); *In re Moreton*, 129 U.S.P.Q. 227, 230 (C.C.P.A. 1961).

In summary diffusion of a diluent into a preformed water-swollen bead from a surrounding aqueous phase is a totally different situation from the case where diluent that is highly water soluble resides in dry bead structure characterized by swelling rapidly when placed in contact with aqueous media to form a water swollen gel bead as disclosed and claimed in this application. In contrast the structure of the chemically cross linked beads disclosed in the reference created in the absence of a water-soluble diluent cannot possibly meet the limitations of the claimed invention.

We have shown above how Jederstrom fails to anticipate the claimed invention. And nothing in Jederstrom remotely suggests or would make obvious to a person of ordinary skill in the art at the time the invention was made the formation of the structure disclosed and claimed in this application and characterized by completely different results and functions from what is disclosed in Jederstrom.

Accordingly the claims are definite, not anticipated by the references and meet the conditions for patentability under Section 103 over the references.

Please apply any other charges or credits to Deposit Account No. 06-1050 under order number 04015-0005001.

Respectfully submitted,
FISH & RICHARDSON P.C.

11 August 2008
Date: _____

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